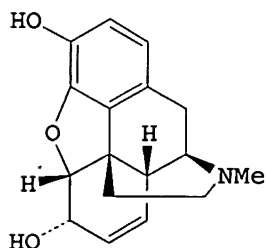


STN-structure Seasel
4/17/07

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=> d ibib abs hitstr 1-2

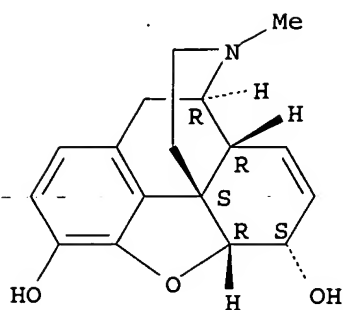
L8 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1983:107 CAPLUS
DOCUMENT NUMBER: 98:107
TITLE: Analysis of morphine in serum by high performance
liquid chromatography with amperometric detection
AUTHOR(S): Vandenberghe, H.; MacLeod, S. M.; Chinyanga, H.;
Soldin, S. J.
CORPORATE SOURCE: Dep. Clin. Biochem., Univ. Toronto, Toronto, ON, Can.
SOURCE: Therapeutic Drug Monitoring (1982), 4(3), 307-14
CODEN: TDMODV; ISSN: 0163-4356
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I

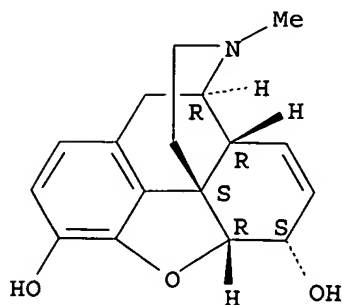
AB A rapid and sensitive micromethod for morphine (I) [57-27-2]
determination in serum or plasma using high performance liquid chromatog. with
electrochem. detection is described. The separation of morphine and
the internal standard, 5-hydroxyquinoline, from interfering compds. present in
plasma was achieved by paired-ion reverse phase
chromatog. using a 70 mM phosphate buffer at pH 5.80. The flow
rate was 1 mL/min. Oxidation of morphine and the internal standard was
obtained
at a potential of 0.60 V. Only 100 μ L of serum or plasma was required.
Anal. recoveries for morphine and 5-hydroxyquinoline were determined as 78% and
63%, resp. The between-day precision of serum samples containing 250, 100,
and 25 μ g/L of morphine was 6.5%, 5.2%, and 9.5% resp. The detection
limit was 1 μ g/L at a sensitivity of 5 nA/V. Children between the ages
of 0 and 5 yr received a bolus of morphine of 11 μ g/kg, followed by an
infusion of 2 μ g/kg/min during surgery. The time-concentration curves
demonstrated an initial rapid fall in morphine concentration with subsequent
attainment of a steady state concentration of approx. 90 μ g/L after 1 h. This
concentration would be expected to produce optimal analgesia in conscious
patients.
IT 57-27-2, analysis
RL: ANT (Analyte); ANST (Analytical study)
(determination of, in blood by high-performance liquid chromatog.,
pharmacokinetics in children in relation to)
RN 57-27-2 CAPLUS
CN Morphinan-3,6-diol, 7,8-didehydro-4,5-epoxy-17-methyl-
(5 α ,6 α) - (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



L8 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1981:127428 CAPLUS
 DOCUMENT NUMBER: 94:127428
 TITLE: Quantitative determination of opium alkaloids by liquid chromatographic methods
 AUTHOR(S): Matantseva, E. F.; Gladyshev, P. P.; Goryaev, M. I.; Bektenova, G. A.
 CORPORATE SOURCE: Inst. Khim. Nauk, Alma-Ata, USSR
 SOURCE: Khimiya Prirodnikh Soedinenii (1980), (5), 730-1
 CODEN: KPSUAR; ISSN: 0023-1150
 DOCUMENT TYPE: Journal
 LANGUAGE: Russian
 AB Ion-exchange and reverse-phase chromatog. is described for separating phenolic and nonphenolic alkaloids from Papaver somniferum capsules using P-cellulose, Bondapak CX/Corasil, and Bondapak C18/Corasil adsorbents. The eluents for the 3 adsorbents were 0.1N Na phosphate buffer (pH 7.5), 0.1N Ca phosphate buffer with 30% MeCN (pH 4.8), and 0.1N Ca phosphate buffer with 30% MeCN (pH 7.5). The wave length used for the monitoring these alkaloids was 254 nm. The alkaloids separated were morphine [57-27-2], codeine [76-57-3], narcotine [128-62-1], thebaine [115-37-7], papaverine [58-74-2], narcotoline [521-40-4], oxydimorphine [125-24-6], narceine [131-28-2], and laudanidine [301-21-3].
 IT 57-27-2, analysis
 RL: ANST (Analytical study)
 (separation of, from opium alkaloids, by ion-exchange reverse-phase chromatog.)
 RN 57-27-2 CAPLUS
 CN Morphinan-3,6-diol, 7,8-didehydro-4,5-epoxy-17-methyl-(5 α ,6 α)-(9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



10/501,353

=> d his

(FILE 'HOME' ENTERED AT 10:14:59 ON 17 APR 2007)

FILE 'REGISTRY' ENTERED AT 10:15:16 ON 17 APR 2007

L1 1 S MORPHINE/CN

FILE 'CAPLUS' ENTERED AT 10:15:53 ON 17 APR 2007

L2 27446 S L1
L3 1096960 S SEPARATION OR PURIFICATION
L4 895 S L2 AND L3
L5 1693 S PREPARATIVE CHROMATOGRAPHY
L6 1 S L4 AND L5
L7 1537 S REVERSE PHASE CHROMATOGRAPHY
L8 2 S L4 AND L7

=> d ibib abs hitstr l6

L6 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:719484 CAPLUS

DOCUMENT NUMBER: 139:247494

TITLE: Method and system for separation and
purification of narcotic alkaloids using
reversed-phase preparative
chromatography

INVENTOR(S): Antonini, Enrico A.

PATENT ASSIGNEE(S): Mallinckrodt Inc., USA

SOURCE: PCT Int. Appl., 73 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003074526	A2	20030912	WO 2003-US4498	20030218
WO 2003074526	A3	20031204		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
CA 2477739	A1	20030912	CA 2003-2477739	20030218
AU 2003216279	A1	20030916	AU 2003-216279	20030218
EP 1487838	A2	20041222	EP 2003-743676	20030218
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK			
CN 1639166	A	20050713	CN 2003-804869	20030218
JP 2005522460	T	20050728	JP 2003-572994	20030218
US 2005182257	A1	20050818	US 2003-501353	20030218
PRIORITY APPLN. INFO.:			US 2002-360321P	P 20020228
			US 2002-434597P	P 20021216
			WO 2003-US4498	W 20030218

AB Narcotic alkaloids are separated by feeding a crude alkaloids solution into a chromatog. column containing a compressed reversed-phase stationary phase, applying an acidic solution (pH 2-5) to the chromatog. column to recover eluates containing morphine, codeine, oripavine, papaverine, thebaine, and

narcotine, resp. from the chromatog. column, adding a caustic solution to resp. eluate to precipitate and sep. the alkaloid. The mobile phase can be acetonitrile, water, ethanol, and iso-propanol. The stationary phase can consist of chemical modified silica, titania, zirconia, or a polymer. The acidic solution can contain acetic acid, formic acid, oxalic acid, succinic acid, lactic acid, and tartaric acid. A reagent can be added to the crude alkaloid solution, such as triethylamine, tetrabutylammonium hydrogen sulfate, sodium dodecyl sulfate, sodium heptane sulfonate, or ammonium sulfate. The caustic solution can contain NaOH, KOH, NH₄OH, and carbonate salts of alkali metals. A system for separating at least one narcotic alkaloid consists of a chromatog. column having a fluid chamber and a media chamber, with a diameter of ≥ 5 cm having an inlet connected to a liquid tank via a 1st valve, an outlet connected to an eluate tank via a 2nd valve, and a fluid purge orifice connected to the outlet via a 3rd valve, a double-acting piston that includes a plate, having an upper face and a lower face, and a rod. The piston is located within the chromatog. column for compressing the stationary phase between the lower face of the plate and the bottom of the chromatog. column. A hydraulic pump provides fluid to the double-acting piston.

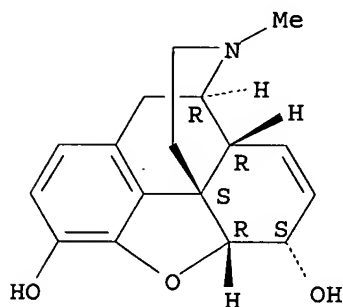
IT 57-27-2P, Morphine, preparation

RL: PUR (Purification or recovery); PREP (Preparation)
(separation and purification of narcotic alkaloids using reversed-phase preparative chromatog.)

RN 57-27-2 CAPLUS

CN Morphinan-3,6-diol, 7,8-didehydro-4,5-epoxy-17-methyl-
(5 α ,6 α) - (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



=> d his

(FILE 'HOME' ENTERED AT 10:14:59 ON 17 APR 2007)

FILE 'REGISTRY' ENTERED AT 10:15:16 ON 17 APR 2007

L1 1 S MORPHINE/CN

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L2 27446 S L1

L3 1096960 S SEPARATION OR PURIFICATION

L4 895 S L2 AND L3

L5 1693 S PREPARATIVE CHROMATOGRAPHY

L6 1 S L4 AND L5

L7 1537 S REVERSE PHASE CHROMATOGRAPHY

L8 2 S L4 AND L7

=> d l1

YOU HAVE REQUESTED DATA FROM FILE 'REGISTRY' - CONTINUE? (Y)/N:y

10/501,353

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2007 ACS on STN
RN 57-27-2 REGISTRY
ED Entered STN: 16 Nov 1984
CN Morphinan-3,6-diol, 7,8-didehydro-4,5-epoxy-17-methyl-
(5 α ,6 α)- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Morphinan-3,6 α -diol, 7,8-didehydro-4,5 α -epoxy-17-methyl- (8CI)

OTHER NAMES:

CN (-)-Morphine

CN Aguettant

CN DepoDur

CN Dulcontin

CN Duromorph

CN l-Morphine

CN M-Eslon

CN Meconium

CN Morphia

CN Morphin

CN Morphina

CN Morphine

CN Morphinism

CN Morphinum

CN Morphium

CN MS Contin

CN Nepenthe

CN Ospalivina

FS STEREOSEARCH

DR 863713-90-0, 8053-16-5, 85201-37-2, 47106-99-0

MF C17 H19 N O3

CI COM

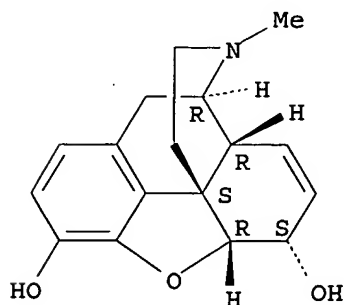
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BIOTECHNO, CA, CABA, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMRX,
CHEMLIST, CIN, CSCHM, CSNB, DDFU, DETHERM*, DRUGU, EMBASE, GMELIN*,
HSDB*, IFICDB, IFIPAT, IFIUDB, IMSCOSEARCH, IPA, MEDLINE, MRCK*,
MSDS-OHS, NAPRALERT, PHAR, PIRA, PROMT, PS, RTECS*, SPECINFO, TOXCENTER,
USAN, USPAT2, USPATFULL, VETU

(*File contains numerically searchable property data)

Other Sources: EINECS**

(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry. Rotation (-).



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

27416 REFERENCES IN FILE CA (1907 TO DATE)

315 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

27446 REFERENCES IN FILE CAPLUS (1907 TO DATE)